

REMARKS / ARGUMENTS

Applicants and their attorney hereby acknowledge and thank the Examiner for his careful evaluation of Applicants' previous submissions and withdrawal of the previous rejection of pending Claims 10-20 under 35 U.S.C. § 102(a) as being anticipated by Cope EP 0 807 510.

At this time, Claims 1-9 and 21-23 remain withdrawn from consideration in the present application.

With reference to the non-final Office Action mailed June 27, 2003, it is noted the Examiner has now rejected pending Claims 10-20, under 35 U.S.C. § 103(a), as being unpatentable over Cope based upon the Examiner's determination that it would be obvious to persons of ordinary skill in the relevant art to modify the teachings of Cope to prepare an extrudable composite that includes cellulosic material (i.e., wood filler) in an amount that is at least as high as in the present invention (i.e., at least 24 weight percent). Applicants traverse this rejection for the reasons which follow.

In one embodiment, the present invention relates, generally, to a process for preparing an extrudable powder blend which comprises blending a mixture of at least one chlorinated vinyl resin (PVC), at least one thermal stabilizer, at least one lubricant, at least one high polymer processing aid, and at least one cellulosic material containing moisture. In this embodiment (i.e., independent Claim 10) the at least one cellulosic material is present in an amount of from 24 to 65 weight percent, based upon the total weight of the powder blend. In another embodiment of the process of the present invention (i.e., independent Claim 13), the at least one cellulosic material is present in the powder blend in an amount of from 34 to 52 weight percent, based upon the total

weight of the powder blend. In still another embodiment of the process of the present invention (i.e., independent Claim 19), a foamed extrudate is prepared by feeding an extrudable free-flowing powder blend comprising at least one chlorinated vinyl resin, at least one blowing agent and from 24 to 65 weight percent of at least one cellulosic material, based upon the total weight of the powder blend, into an extruder, and then performing additional processing steps. Thus, the present invention requires at least 24 weight percent, and up to 65 weight percent, of at least one cellulosic material (for example, wood flour) in the extrudable powder blend.

The Examiner states on page 3 of the Office Action that Cope discloses the possibility of having a blend with a volume ratio of wood filler : resin of from 15:100 to 140:100 and that it would be obvious to persons of ordinary skill in the art that "the use of the resin/wood filler blend compositions as taught by the examples [of Cope] would be similarly useful and applicable to the larger amounts of wood filler taught in the full disclosure [of Cope]".

A finding of obviousness of an invention requires that there be a suggestion, either expressly in the prior art or in the general knowledge of persons of ordinary skill in the relevant art, that the prior art teachings could be modified to result in producing the invention and that such modification is reasonably expected to be successful. It is respectfully noted that, even assuming that Cope contains a suggestion to modify its teachings to prepare an extrudable composite containing a volume ratio of wood filler : PVC resin as high as 65:100 to 140:100 (i.e., greater than about 20 wt %; for expansion of conversion of units, see the Amendment and the Declaration of Inventor John Robert Patterson previously filed in this application April 22, 2003), such a

suggestion is not supported by the disclosure of Cope, nor would such a modification have been expected to be successful based upon the knowledge and experience of persons of ordinary skill in the art. Moreover, as discussed hereinafter, it is believed that the general knowledge of persons of ordinary skill in the relevant art would lead such persons to conclude that such a modification of Cope would not be successful and, therefore, teaches away from such modification.

With respect to the disclosure of Cope, it is respectfully noted that even if Cope were assumed to suggest the preparation of an extrudable composite containing resin, wood flour and various optional additives having a volume ratio of wood filler : resin that is as high as 140:100, the amount of wood flour in the PVC-containing composites of the examples provided in Cope (see the first four examples) is at most a volume ratio of 65:100 (which is at most only about 17-20 weight percent). In fact, only the two remaining examples in Cope, which utilize polystyrene, teach and support the successful preparation of a resin composite having the higher volume ratios (i.e., up to 140:100) of wood flour : resin. This is because resin composites having wood flour : resin volume ratios higher than about 65:100, where PVC is the resin, are known in the art to exhibit problems relating to the processing and handling characteristics of the resin composite including, but not limited to, powder flow, melt flow and melt strength.

More particularly, as noted in the present specification at page 1, lines 24-31, the present invention addresses a problem in the field of PVC compositions whereby it has not previously been possible to add cellulosic material, such as wood flour, to a PVC composition in an amount of more than about 20 weight percent, based on the total weight of the composition (which corresponds to a volume ratio of wood flour : resin of

about 65:100). This is because addition of more than about 20 weight percent wood flour negatively affects many of the processing and handling characteristics of the resin composite, including but not limited to powder flow, melt flow and melt strength. Thus, the knowledge and experience of persons having ordinary skill in the relevant art would teach away from modifying Cope to utilize an amount of wood flour greater than a volume ratio of wood flour : resin of from 65:100 to 140:100 (i.e., greater than about 20 wt %).

In contrast, the present invention, as recited in amended independent Claims 10, 13 and 19, provides a process for preparing an extrudable powder blend having PVC resin and greater than 20 wt % of at least one cellulosic material (more particularly, from 24 to 65 weight percent wood flour), based on the total weight of the powder blend. Thus, it is respectfully submitted that Cope fails to disclose all of the features of the present invention, particularly, an extrudable powder blend having higher wood flour content than previously achieved in the art. As noted at page 7, lines 14-18, of the present specification, the present invention solves the above-described problem of using increased amounts of cellulosic materials in extrudable powder blends that include PVC by utilizing a "particular combination of chlorinated vinyl resins, thermal stabilizers, lubricants, high polymer processing aids, and cellulosic materials" (emphasis added).

In the foregoing circumstances, it is respectfully submitted that independent Claims 10, 13 and 19 are not made obvious by the disclosure of Cope because Cope provides no reason to believe that modification of its teachings, i.e., increasing the amount of wood flour used to prepare an extrudable powder blend containing PVC and

more than 24 wt % wood flour, would be successful and, in fact, the expectations of persons having ordinary skill in the relevant art teach away from such expectation of success. Thus, it is believed that independent Claims 10, 13 and 19, as well as Claims 11-12, 14-18 and 20 which depend directly or indirectly therefrom, are allowable over Cope.

CONCLUSION

In view of the foregoing explanation and remarks, re-examination and allowance of pending Claims 10-20 are respectfully requested. If, however, there remain any open issues which the Examiner believes can be resolved by a telephone call, the Examiner is cordially invited to contact the undersigned attorney.

An extension fee of \$420 is believed to be due in connection with the submission of this Response. A Petition for Extension of Time accompanies this Response and provides for payment of the aforesaid fee. No additional fees are believed to be due, however, if any such fees, including petition or extension fees, are due, the Commissioner is hereby authorized to charge them, as well as to credit any overpayments, to Deposit Account No. 18-1850.

Respectfully submitted,

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